

REMARKS

In the April 23, 2004 Office Action, the Examiner noted that claims 1-18 were pending in the application; rejected claims 1-5, 15 and 18 under 35 U.S.C. § 101; rejected claims 1, 3-6, 11, 15, 16 and 18 under 35 U.S.C. § 102(b); and rejected claims 2, 7-10, 12-14 and 17 under 35 U.S.C. § 103(a). In rejecting the claims, U.S. Patents 5,832,527 to Kawaguchi; 6,185,574 to Howard et al.; 6,195,695 to Cheston et al.; 6,018,741 to Howland et al.; and 5,959,860 to Styczinski (respectively References A-E in the April 23, 2004 Office Action) were cited. Claims 1-18 remain in the case. The Examiner's rejections are traversed below.

Newly Cited Prior Art

U.S. Patent 5,832,527 to Kawaguchi

The Kawaguchi patent is directed to a file management system incorporating soft (or symbolic) link data to access stored objects, where a symbolic link name data set is stored in a directory. The relative position of a block in the file system is converted into a physical position on a disk to access data at the physical position. An example of an entry containing symbolic link contents is provided in Fig. 19 which corresponds to an "inode" in UNIX® (see column 14, lines 13-14). The symbolic link data is used by the operating system to reduce the number of input/output operations by referencing the "contents of the symbolic link without referring to a data storage area of the file system ... during a pathname resolution process" (Abstract, last sentence).

U.S. Patent 6,185,574 to Howard et al.

The Howard et al. patent is directed to a multiple display file directory and file navigation system for a personal computer. The system includes a "virtual directory" that "is a directory of file information which can be presented to a computer operator, operating system, application program or some other aspect of a computer system as a directory that is representative of a physical file storage device(s)" (column 7, lines 27-31), but "is merely an apparent or virtual directory since it can merely store file attribute information and is not actually affiliated with an actual physical storage device" (column 7, lines 32-35). For this purpose, properties of a file or "file attribute information" includes

file name, type of data represented by the file (e.g., text file, executable file, Word Perfect 6.1 file, etc. (file size, date and time of file creation or modification, date and time the file

was accessed, programs which caused the file to be accessed, physical file storage device where the file data for the file is stored, parent directory on the physical file storage device in which the file is stored, child or subdirectory for the file, user defined descriptions for the file, etc.

(column 7, lines 45-53). Using the file attribute information, applications are allowed to access files within a virtual file system.

U.S. Patent 6,195,695 to Cheston et al.

The Cheston et al. patent is directed to a method for recovering from system crashes by dividing a computer hard disk into two or three regions each of which contains the system area. When operation of the computer system is initiated, one of the regions is used, while the other is put in a stand-by status. Application programs and data are stored in each partition as they are initiated and the backup copy is updated periodically, so that if the working copy crashes operation can be continued using the backup copy.

U.S. Patent 6,018,741 to Howland et al.

The Howland et al. patent is directed to managing objects in a dynamic inheritance tree having a root node and a plurality of child nodes, each of which has at least one attribute. In response to a request for the value of an attribute in a child node, the value of that attribute in the child and the parent is supplied. Thus, all of the attribute data about a parent node is inherited by lower level nodes and the relationship among the nodes is defined by indexing.

U.S. Patent 5,959,860 to Styczinski

The Styczinski patent is directed to a method for operating a redundant array of expensive disks (RAID). Random access memory, both volatile and nonvolatile, is used to speed up input/output operations and recover from system crashes using log data stored in the nonvolatile memory.

Rejections under 35 USC § 101

On page 2 of the Office Action, claims 1-5, 15 and 18 were rejected under 35 USC § 101 for failing to recite data structures physically embodied in computer-readable media. Independent claims 1 and 2 have been amended to recite that the plurality of volumes are "on at least one computer readable medium" (lines 1 and 2). Therefore, it is submitted that

claims 1 and 2 and claims 3-5 which depend from claim 1 meet the requirements of 35 USC § 101.

Claims 15 and 18 are both directed to “a file management method” (line 1). Thus, they are not directed to a disembodied file structure. Nothing was cited in support of a rejection of a method as being directed to non-patentable subject matter when the method operates on policy attribute data and manages a file as recited in claims 15 and 18.

If the rejection under 35 USC § 101 is not withdrawn, the Examiner is respectfully requested to **contact the undersigned** by telephone to arrange an Examiner Interview **prior to issuing another action** to discuss what changes are necessary to overcome the rejection under 35 USC § 101.

Rejections under 35 USC § 102

In item 2 on pages 3-4 of the Office Action, claims 1, 3-6 11, 15, 16 and 18 were rejected under 35 USC § 102(b) as anticipated by Kawaguchi. Claim 1 has been amended to clarify that the policy attribute data specifies “file usage, determined by an administrative user” (claim 1, line 4). As described in the application on pages 2-4, a conventional UNIX operating system does not provide a file system administrator with the ability to control the disk on which a file is stored, restrictions on file usage for a group of users, etc. On the other hand, as described on pages 6, 11, 12, 18-22, 30, 31, 37 and 38, the present invention provides an administrator with additional control by setting policy attribute data as defined by the administrator who is called an administrative user in the amended claims. Nothing has been cited or found in Kawaguchi teaching or suggesting a system or method of operating a computer that provides this capability to users of any class. The cited portions of Kawaguchi, column 4, lines 9-14 and 37-43 merely describe the symbolic link as “a file and ... pathname to specify the file” (column 4, lines 12-13) and “file attribute data [that] includes a file type, the number of hard links, security data (such as an owner, an owner group, and access permission), and data quantity” (column 4, lines 37-41). There is no suggestion in these portions of Kawaguchi that any of this type of data is used for “specifying file usage ... in correspondence with path information of a directory” (claim 1, lines 4-5). Therefore, it is submitted that claim 1 and claims 3-6 and 11 which depend therefrom patentably distinguish over Kawaguchi.

In a manner similar to claim 1, claims 15, 16 and 18 have been amended to recite that the policy is “determined by an administrative user” and therefore, claims 15, 16 and

18 patentably distinguish over Kawaguchi for the reasons discussed above with respect to claim 1.

In item 3 on pages 4-5 of the Office Action, claims 2, 7 and 12 were rejected under 35 USC § 103(a) as unpatentable over Kawaguchi in view of Howard et al. According to the Office Action, Howard et al. teaches that a subdirectory inherits policy attribute data of a directory or is assigned specific policy attribute data on which file management is based. However, the only relevant information found in the cited portion of Howard et al. is that the file attribute information may include a “parent directory on the physical file storage device in which the file is stored, child or subdirectory for the file, user defined descriptions for the file ...” (column 7, lines 50-53). It is submitted that “user descriptions” is insufficient to suggest “policy attribute data specifying file usage, determined by an administrative user” (claim 2, lines 3-4) or that the policy attribute data can “be inherited to a subdirectory” (claim 2, lines 5-6). It is submitted that the mere fact that there is a relationship between parent and child directories would **not** suggest to one of ordinary skill in the art that the computer system includes “an assigning unit assigning policy attribute data of a directory so as to be inherited to a subdirectory, or assigning specified policy attribute data indicating a policy on which file management is based to the subdirectory” (claim 2, last three lines). Therefore, it is submitted that claim 2 and claim 7 which depends therefrom patentably distinguish over Kawaguchi in view of Howard et al.

The Abstract of Howard et al. was cited as teaching the additional limitations recited in claim 12. Presumably, this is a reference to the term “archiving” in the next-to-last sentence of the Abstract. It is not clear why the discussion of archiving in the specification of Howard et al. at column 2, lines 44-65; column 17, lines 34-43; or column 26, lines 38-48 were not cited. However, nothing has been found in any of these portions suggesting modification of Kawaguchi to overcome the deficiencies discussed above, only that the directory system disclosed by Howard et al. is able to more easily manage files that have been archived, or multimedia files. Therefore, it is submitted that claim 12 patentably distinguishes over Kawaguchi in view of Howard et al. for the reasons discussed above with respect to claim 1.

On pages 6 and 7 of the Office Action, claims 13 and 14 were rejected under 35 USC § 103(a) as unpatentable over Kawaguchi in view of Howard et al. and Cheston et al. In making this rejection, Cheston et al. was cited as teaching something relevant to an archive file. However, as discussed above, Cheston et al. discloses a standby system, not

an archiving system. Although the term "back-up or archive copy" (column 2, line 50) is used in the cited portion of Cheston et al. the entire archive copy itself is referred to as "hidden" (column 2, line 51) not "a hidden file in the archive file" (column 13, line 2). It should be clear from reading the specification of the application that claims 13 and 14 are directed to an archive file system which is visible to the operating system and the user, like conventional systems, not a standby system like that taught by Cheston et al.

Claim 13 recites that an archive file includes a hidden file in which the policy data is stored. This implies that the archive file is not hidden, at least from the operating system. There is no suggestion of this sort of structure taught or suggested by Cheston et al. Therefore, it is submitted that claim 13 and claim 14 which depends therefrom further patentably distinguish over the prior art.

On pages 7-8, claim 8 was rejected under 35 USC § 103(a) as unpatentable over Kawaguchi in view of Howard et al. and Howland et al. In rejecting claim 8 of the subject application, the only portion of Howland et al. that was cited was claim 1. Thus, the Applicants assume that the Examiner found nothing more relevant to claim 8 in the specification of Howland et al. This is confirmed in reviewing Howland et al. As discussed above, Howland et al. is directed to managing asynchronous processes in which all of the attribute data about a parent node is inherited by lower level nodes and the relationship among the nodes is defined by indexing. It is submitted that one of ordinary skill in the art would not have looked to Howland et al. for a suggestion of modifying either Kawaguchi or Howard et al. For the above reasons, it is submitted that Howland et al. contains nothing that would teach or suggest to one of ordinary skill in the art how to modify the combination of Kawaguchi and Howard et al. to overcome the deficiencies described above with respect to claim 2. Therefore, it is submitted that claim 8 patentably distinguishes over the combination of these three references for at least the reasons discussed above with respect to claim 2.

On pages 8-10, claims 9 and 10 were rejected under 35 USC § 103(a) as unpatentable over Kawaguchi in view of Styczinski. As discussed above, Styczinski discloses using nonvolatile memory to store information to recover from a system crash. Applicants acknowledge that it is known in the art to use nonvolatile memory to store information that is desired to be retained when power is not provided to the memory unit. However, claims 9 and 10 are not directed to the **volatility** of information, but rather **violation** of policy attributes. Nothing was cited or has been found in Styczinski relevant

to the limitations recited in claims 9 and 10, or that would suggest modifying Kawaguchi to overcome the deficiencies discussed above with respect to claim 1. Therefore, it is submitted that claims 9 and 10 patentably distinguish over the combination of Kawaguchi in view of Styczinski for the reasons set forth above with respect to claim 1 and the additional limitations recited therein.

On pages 10 and 11 of the Office Action, claim 17 was rejected under 35 USC § 103(a) as unpatentable over Kawaguchi in view of Howland et al. In rejecting claim 17, column 4, lines 9-43 of Kawaguchi and column 3, lines 8-12 of Howland et al. were cited. The cited portion of Kawaguchi describes hard links each of which define a relationship between a directory and a file (see column 4, lines 25-27) and soft (or symbolic) links, each of which is "determined by a user when creating a file, and there is no means to change the contents" (column 4, lines 30-32), presumably of the symbolic link. As acknowledged in the Office Action, Kawaguchi does not disclose the limitations recited on the last three lines of claim 17. Therefore, Howland et al. was cited as disclosing that "a child node may be moved within the index tree structure so that the child node has a new parent node" (column 3, lines 8-9) and when the attribute of the child node is requested after the move, "the value of the attribute of the new parent node is provided" (column 3, line 12). However, Howland et al. does not disclose assignment of policy attribute data to the file, as recited in claim 17. All that occurs in the method taught by Howland et al. is a change in the index to establish a pointer between the child and the new parent, so that the attribute of the new parent can be provided in response to a request. It is submitted that one of ordinary skill in the art would not find it obvious to modify Kawaguchi to meet the limitations recited in the last three lines of claim 17 based on the teachings of Howland et al. For the above reasons, it is submitted that claim 17 patentably distinguishes over Kawaguchi in view of Howland et al.

SUMMARY

For the reasons set forth above, it is submitted that claims 1-5, 15 and 18 meet the requirements of 35 U.S.C. § 101 and the cited prior art does not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-18 are in a condition suitable for allowance. Reconsideration of the claims are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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